

STRATEGY IMPLEMENTATION: THE EFFECT OF DECENTRALIZATION, PARTICIPATION IN BUDGET SETTING, AND MANAGERS' ATTITUDE ON PERFORMANCE

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ABSTRACT

The performance of a business unit, to a large extent, is determined by the quality of its strategy and how well the strategy is implemented. This study examines the effect of strategy implementation on performance. In particular, it investigates the extent to which the fit between two crucial strategic supporting systems, namely decentralization and budget system, and managers' attitude with the strategy of SBU on performance. It is argued that the more consistent the level of decentralization, degree of participation in the budget system and managers' attitude with the SBU strategies, the higher the performance will be, and vice versa. Unlike most prior studies, the hypothesis was tested by adopting the system of fit approach. Responses from 75 divisional managers of 75 diversified companies are analyzed. The results show that managers pursuing a strategy of differentiation (cost leadership) report high performance when they worked in highly (less) decentralized structures, are given more (less) opportunity to participate in the budget process, and had strongly positive attitude toward their jobs and their firms. These findings are consistent with the basic premise of strategy implementation that different strategies should be supported with different configuration of organizational structure and process to achieve optimal results.

Keywords: *strategy implementation, decentralization, participation, attitude, system of fit.*

INTRODUCTION

It has been long argued that the performance of a firm is also affected not only by the quality of strategic choices, but also by how well the strategy is implemented (Govindarajan 1988; Anthony and Govindarajan, 2003; Thompson, *et. al.*, 2010). The strategy literature, however, is filled more with the strategy formulation (content) studies than with strategy implementation ones (Atkinson, 2006). Okumus and Roper's (1998: 21) observation of the literature in the past two decades lead them to conclude '....despite the importance of strategy implementation process, far

more research has been carried out into strategy formulation rather than into strategy implementation....'. This is understandable since framework for strategy formulation is well developed and widely available, such as Porter's Five Forces Model (1980), and more recently Kim and Mauborgne's Blue Ocean Strategy (2005), whereas framework for strategy formulation is less clear. This may explain the lack of top-level executives' awareness about the importance of preparing strategy implementation agenda. Miller (2002) reported that 70 percent organizations fail to implement their new strategies, and Mankins

and Steele (2005) reported that 40 percent of the value anticipated in strategic plan did not materialize. The popularity of the strategy implementation tool (balanced scorecard) introduced by Kaplan and Norton (1996, 2001) indicates the increasing awareness among executives about the importance of paying attention to strategy implementation issues. Indeed, more and more companies have been adopting balanced scorecard to translate vision and strategy into operational measures. However, strategy implementation deals with not only translation of vision and strategy into operational terms, but also with developing appropriate structure and systems, ensuring that firms' resources are allocated appropriately, and building commitment among managers. As also suggested by Kaplan and Norton, the operational measures should be tied with budget and performance evaluation systems. The still large number of companies that failed to implement their strategies properly reported by Miller and Mankins and Steele, therefore, is attributable more to the absence of appropriate systems, structures, and other operating procedures, and the lack commitment, to make the strategy works.

A well-defined strategy improves the performance of the firm when the efforts of different units or work groups have the same direction and when the resources are spent only on valued added activities. Thompson *et al.* (2010: 17) argue that "The better conceived a company's strategy and the more competently it is executed, the more likely that the company will be a standout performer in the market place." A poor strategy implementation can nullify the potentially positive effect of a well-defined strategy on performance, because employees' skills, talents, and other organizations' resources are wasted. The strategy execution, in this regard, refers to the development of structure, resource allocation system, well-crafted policies, information and communication systems, reward systems, culture, and leadership. Peters and Waterman (1982)

suggest that the alignment of strategy with structure, systems, style, staff, and shared value (The McKinsey's 7 S) is critical to ensure success. Aaltonen and Ikavalko (2002) and Freedman (2003) propose the alignment of strategy with organizational structure, culture (that is receptive to change), change management systems and skills, and communication and employee commitment to vision is important to make the strategy effective. Okumus (2003) classify factors affecting the strategy implementation into internal context (the configuration of structure, culture, and leadership) and organizational process (the configuration organizational activities, such as operational planning, resource allocation, communication, and control system).

Empirical evidence supports the contention that the fit between strategy and these elements affect performance positively. Govindarajan's study (1988) showed that the fit among strategy, structure, budget evaluative style, and managers' locus of control determined performance; the higher the degree of fit, the higher the performance of the companies, and vice versa. Roth *et al.* (1990) found that a higher degree of fit between international strategy and organizational design was associated with high performance of strategic business units; Sabherwal and Chan (2001) reported that the fit between strategy and information system impacted performance; Slater and Olson (2000) found that the alignment between strategy and sales force management affected performance positively. Other studies reported that important strategy implementation elements were functional areas such as accounting, marketing, and information management (Naranjo-Gil and Hartmann, 2006); human resource management (Rajagopalan, 1997); strategic planning characteristics (Veliyath, 1993); middle management involvement (Floyd and Woolridge, 1992). This study is designed to examine three important elements of strategy implementation: structure (defined and level

of decentralization), organizational process (defined as level of participation in budget setting), and managers' commitment (defined as the attitude toward jobs and firms) at the strategic business units. It is a response to concerns about the limited studies in the strategy implementation area.

Based on the literature review, Geiger *et al.* (2006) concluded that the concept of internal alignment between and structure became a primary contingency for firm performance. Miller (1996) argues that the performance of companies whose structures fit with the strategies would be higher than those that do not. Chandler's study (1962) serves as the main reference in the strategy-structure research. According to Chandler, diversification adds complexity and increase uncertainty to firms, and hence requires new administrative systems to ensure the best use of the firms' resources. In a similar vein, Govindarajan (1988) and Gupta and Govindarajan (1984) posit that business units pursuing a strategy of differentiation tended to have higher environmental uncertainty than those pursuing a strategy of cost leadership. Miles and Snow's study (1978) found that prospectors faced higher environmental uncertainty than did defenders. Therefore, inherently different strategies are associated with different uncertainties, and organizational structures should be designed to help the companies cope with the uncertainty created by chosen strategies. The empirical evidence strongly indicates that the fit between strategy and structure is important to achieve efficiency (Miles and Snow, 1994).

A firm's structure reflects the ways the firm organizes the activities and resources to cope with uncertainty created by the chosen strategy. It refers the distribution of jobs and the delegation of authority within the organization, or simply put, it reflects the degree of decentralization in the organization. Managers of divisions with more decision making authorities (high decentralization) will have

more options and have more flexibility to deal with the highly uncertain environment. This suggests that the more uncertain the environment (as a result of the choice of strategy), the more decentralized the firms should be (Burns and Stalker, 1961; Galbraith, 1973; Govindarajan, 1986, 1988; Lawrence and Lorch, 1967; Tushman and Nadler, 1978). More importantly, to execute their options, the managers need to have access on resources. These managers should be allowed to intensively participate in the budget setting process. It may be argued, then, that both decentralization and participation should be designed to meet the demand of the uncertainty created by the choice of the SBU strategy (differentiation or cost leadership). Olson *et al.* (2005) reiterate the significance of structure and process in strategy implementation. It is also important to note that given decentralization is an important dimension of structure, it is surprising that since the Govindarajan's study (1988) that examined the impact of decentralization in strategy implementation, only very few studies have been done to examine the impact of strategy-decentralization fit at the SBU level. This study will fill this gap in the literature.

Research has also shown the importance of managers' behavioral attributes, such as locus of control, need for achievement, risk aversion, to performance. The main argument is that to be effective, strategies need to be matched with managers' behavioral attributes because different strategies deal with different challenges, and hence require different types of behaviors (Hambrick and Mason, 1984). Govindarajan (1988), Miller *et al.* (1982), and Miller and Toulouse (1986) reported that differentiation strategy was effective when led by managers whose locus of control were more internally oriented. Gupta and Govindarajan (1984) found that tolerance for risk and tolerance for ambiguity were associated with high performance in firms with build strategies, but hampered performance in firms with harvest strategies. However, Waldersee

and Sheather's study (1996) showed that locus of control and tolerance for risk did not affect the effectiveness of strategy implementation. Waldersee and Sheather suggest that the strategy-managers' behavior matching is more complex than what has been portrayed by prior research, and hence a more research is needed to get a better understanding about the impact of the managers' behaviour in strategy implementation. The examination of the impact of managers' attitude toward the jobs and firms, therefore, will be an important contribution to the literature since this study is the first to incorporate this variable in strategy implementation.

The rest of the paper is organized as follows. The next section, describes background theory that links strategy, decentralization, budget system and performance, which will be followed by the hypothesis development. The research methods, comprises of sample selection and measurement of variables, are delineated in the following section. The results of the analysis and the discussion of the findings are presented in the last two sections.

BACKGROUND THEORY

Thompson *et. al.* (2010) argue that without careful implementation plans, strategies will not improve the performance of companies substantially. Strategy implementation is often considered to be more important than the formulation itself. Following Miles and Snow (1978) and Slater and Olson (2000), this paper mainly argues that variation of performance across firms is explained more by the quality of implementation than by the type of strategy. In the words of Slater and Olson '...there is a greater performance variation within strategy types than there is between strategy types...'.

Strategy and Uncertainty

Strategy in this study is defined in terms of the way a business unit competes in the

market place, or the business unit's competitive strategy. Porter's (1980) framework of strategy is adopted to assess the business unit strategic orientation. This framework is adopted because it has been shown to be internally consistent and has been widely accepted in the academic community (Govindarajan, 1988; Hambrick, 1983; Omanidhi and Stringa, 2008). Miles and Snow (1978) reported that firms pursuing a prospector strategy faced a more unpredictable and uncertain task environment, whereas firms pursuing a defender strategy faced a relatively stable external environment. Govindarajan (1986), Gupta (1987), Dess and Davis (1984), Hambrick (1983), and Porter (1980) argue that the choice of differentiation rather than a low cost strategy would lead to higher uncertainty in the unit's task environment. This is because a firm adopting a strategy of differentiation will rely its success mainly on product innovation. According to Biggade (1979), emphasizing the activities of the company to generate a new product means dealing with high uncertainty because the firm is betting on products that may not be accepted by the market (consumers). On the contrary, a firm following a strategy of low cost focused its efforts on cost reduction. The firm generally has narrow product lines and is less concerned with product innovation. Therefore, compared to differentiators, the cost leaders face lower environmental uncertainty.

Decentralization and Budget Setting System

The aforementioned studies above describe that a successful implementation of strategy requires that the strategy be supported with appropriate (or fit) organizational internal arrangements, or internal context. Internal context refers to the configuration of organizational structure, planning system, procedures, culture, and leadership. Hrebiniak and Joice (1984) assert that planning and organizational design are the two important decisions in a strategy implementation process. Organiza-

tional structures indicate the distribution of power within an organization. An organization characterized with a high degree of decentralization indicates that lower level units possess more autonomy than an organization with a low degree of decentralization. Decentralization refers to the amount of decision making authorities that is delegated to subordinates by their superiors (Ford & Slocum, 1977; Govindarajan, 1988). It represents the extent to which the subordinates are given formal power in his daily operation. Burns and Stalker (1961) and Thompson (1967) argue that more decentralization is needed in the presence of a greater level of environmental complexity and uncertainty. Accordingly, it may be argued that divisional managers pursuing a strategy of differentiation should be given more authority (more decentralization of decision making authority), whereas divisional managers pursuing a strategy of low cost less decision making authority is needed, and hence more centralized decision making authority is appropriate.

Findings about the performance implication of strategy-structure fit are abundant in the literature. While most of these studies also incorporated other variables, none has included planning system, an important complementary system to strategy structure fit. The high decision making authority possessed by divisional managers pursuing differentiation strategy should be complemented with more access to resources and flexibility in preparing the budgets. As Hrebiniak and Joice state, there are two important decisions to make in implementing strategy: organizational design and planning system.

Budget setting is a planning activity in organizations that helps managers to define the domain of operation of the firms. It is an ambiguity-reducing process of filtering and processing information through which organizations are provided a clear and a workable scheme for taking activities (Schreyogg and Steinmann, 1987). The unpredictable nature

and the ambiguity of future events associated with a highly uncertain environment make planning problematic (Chenhall and Morris, 1986). In the face of uncertainty, planning systems should be more participatory in nature (Waterhouse and Tiessen, 1978). Galbraith (1973) and Tushman and Nadler (1978) argued that varying the degree of participation with levels of uncertainty improves effectiveness because participation allows information exchanges among managers or subordinates that potentially reduce uncertainty and ambiguity. Govindarajan (1986) found that high (low) participation in a budget setting was associated with high performance when the uncertainty was (low) high. Given that budget is an important aspect of the planning system, it should also be aligned with the strategy. The amount of participation of divisional managers in the budget process should be aligned with the strategy to ensure effective implementation. Govindarajan and Shank (1992) found that budgeting system varied with strategy. Anthony and Govindarajan (2003) suggest that managers pursuing differentiation strategy should be allowed to participate more intensively in the budget setting process. Such a high participation, however, is not needed for managers pursuing a low cost strategy, because changes in the environment do not happen very often.

The high involvement of divisional managers in determining the input needed to support the operations (i.e., high participation in the budget setting) gives the managers pursuing a differentiation strategy more flexibility in accessing the resources needed to deal with the highly uncertain environment. And as argued in the preceding discussion, an important organizational arrangement (e.g., structure) needed to deal with the uncertainty associated with the chosen strategy is decentralization. This means that structure and budget setting system are two important complementary elements of effective strategy implementation (Hrebiniak and Joice, 1984);

their presence in organization reinforces each other to make strategies work more effectively. It is argued that a high degree of decentralization will work optimally if it is accompanied with a high access to input (i.e., high participation in the budget setting process) needed to execute the decision making authority. Managers with high decision making authorities cannot make the decisions they are supposed to make if they do not have an easy access to the resources to support the decisions. In this situation, the decentralization may be perceived as 'pseudo decentralization'. Analogously, managers with a limited decision making authority will not be able to make the best use of all the resources that they have access to. This suggests that strategy-structure-budget system should be aligned to ensure high performance.

Attitude

An attitude is a behavioral attribute that describes an individual's degree of like or dislike for an object. Eagly and Chaiken (1995) state that attitude is the psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. Gibson *et al.* (2003: 101) define attitude as "a positive or negative feeling or mental state of readiness, learned and organized through experience, that exerts specific influence on a person's response to people, objects, and situations". As these definitions imply, attitude is generally positive or negative perceptions of a person, place, thing, or event, which is often called as the attitude object. For high level managers, the main attitude objects that potentially affect their commitment to improving the performance of the firms are the works and the organizations. Managers' attitudes toward jobs and organizations reflect the managers' evaluation and perceptions about what they do and the organizations they work for. These evaluation and perception are the product of a relatively long process of learning. Every

manager within an organization tends to develop a different attitude towards his/her job and organization. This attitude will then affect the individual's reaction toward the organizational events and policies, which, in turns, affects the way the individual does things, and more importantly, his/her commitment to success. In other words, a person's attitude is an important determinant of the person's behavior; it dictates the person to behave in a certain way instead of another. Many scholars argue that this behavior, in turns, will determine the effectiveness of strategy implementation (Thomas *et al.*, 1991; Waldershee and Sheather, 1996). Indeed, studies have shown the impact of management personality and behavior, such as locus of control, risk aversion, and educational background, on the effectiveness of strategy implementation.

Managers whose attitudes towards their jobs and organizations are positive, tend to have a strong emotional attachment toward what they do and the firms they work. They are proud of what they do and are highly committed to the companies they work for, and hence they will do their best to execute programs and to achieve the strategic objectives of the companies. In contrast, managers with less positive attitude toward their jobs and organizations tend not to have strong personal affiliation with the companies and are not proud with what they do. They will be less motivated to make sacrifices for the betterment of the companies. In the context of strategy implementation, managers with highly positive attitude will be more focused and more motivated to execute the strategies of their organization; they will not be easily satisfied with what they have achieved. Accordingly they will try hard to exploit the potential benefits of the synergy of the strategy-structure-system fit to improve the performance of organizations. On the contrary, managers with less positive attitude tend to take things for granted, and will be less motivated to give the best of their abilities to the companies. For them, strategy does not provide a challenge to excel; they tend

to pay attention only the routine activities. Such managers will not a strong willingness to integrate the existing strategy, structure, and systems for the good of the organizations.

The theory of cognitive dissonance (Festinger, 1957) can be used to explain the positive impact of attitude on strategy implementation. Cognitive dissonance is "A mental state of anxiety that occurs when there is a conflict among an individual's various cognitions (for example attitudes and beliefs) after a decision has been made" (Gibson *et al.*, 2003: 102). Analogously, it may be argued that individuals who have a highly positive attitude will be cognitively disturbed when they feel there is there a problem or something wrong with they strategy implementation process. This state of cognitively disturbed will then motivate them to find ways to solve the problem; they will be motivated to overcome the obstacles that inhibit the coherence of the strategy, structure, and systems. In other words, managers with strong attitudes toward jobs and firms will have a better chance to capitalize on the benefits of the strategy-decentralization-budget system fit. The less positive the managers' attitude, the less motivated the managers to exploit the potential positive impact of strategy-decentralization-budget system fit. Hence, managers' attitude towards jobs and firms serve as another important element that determines the success of strategy implementation processes.

HYPOTHESIS

The hypothesis is developed on the following arguments. First, as Miles and Snow (1978) and Porter (1980) argue a strategy can perform equally well in most industries. Second, the strategy selected by a firm greatly affected the uncertainty that the firm must face (Chandler, 1962; Govindarajan, 1988; Gupta and Govindarajan, 1984; Miles and Snow, 1978), hence a certain type of structure (i.e., level of decentralization) is required to support

the implementation of the strategy. Third, designing budget setting systems and level of decentralization consistent with the strategic control requirement may enhance the performance of the business units. Finally, managers' positive attitude towards their jobs and firms further facilitates the strategic implementation process; the more positive the attitude, the more effective the strategy implementation will be.

Given the preceding argument, the following hypothesis, stated in the alternative form, is proposed.

HA: A high degree of fit between strategy and the three contextual factors (i.e. planning system, structure, and attitude) is associated with high performance; and a low degree of fit is associated with low performance.

RESEARCH METHODS

Sample

A total of 320 questionnaires were sent to divisional managers. These managers were randomly selected from *America's Corporate Families*. To ensure anonymity, self-addressed, pre-paid envelopes were enclosed in the questionnaires. Out of 320 questionnaires, 29 questionnaires were returned undelivered, 3 managers had retired and 26 had moved to other companies. Responses were received from 83 managers (28.5 percent response rate), but 8 incomplete responses were dropped. Tests of non-response bias were conducted for the 75 complete responses by comparing early responses (46 responses) to late responses (29 responses) in terms of their scores on participation, attitude, strategy, structure, performance, and the respondents' tenure at the organizations. No significant differences are found between the groups at the conventional level ($p < 0.05$).

The final sample comprises of 75 usable responses from 75 divisional managers. These respondents managed divisions with the

number of employees ranging from 15 to 3000 and the means is 488. Respondents' average age and tenure are 48.1 and 17.4 years respectively, and they had been in the current position an average of 6 years. Table 1 presents the demographic information about respondents.

Table 1. Demographic Data of Respondents (n=75)

	Mean	Standard Deviation	Range of Value
Age*	48.1	7.4	31 – 64
Tenure	17.4	8.8	2 – 40
Years in Position	5.7	4.8	1 – 30
Numbers of Employees	469	488	15 – 3000

*N = 74 (one respondents did not fill out the question about age).

Measurements of Variables

Strategy. Strategy refers to the competitive strategy developed by SBUs: either cost leadership or differentiation. The instrument developed by Govindarajan (1988) is used to measure this variable. This instrument asks managers to indicate the position of their products relative to those of leading competitors in six areas: price, percent of sales spent on R&D, percent of sales spend on marketing expenses, quality, image, and features. The Cronbach alpha for this measure is 0.85.

Participation. Participation refers to subordinates' perceptions about the extent to which they get involved in the determination of the annual or other periodical budget of their departments. Following Kren (1992), a three-item instrument adopted from Milani (1975) is used to measure this variable. The Cronbach alpha coefficient is 0.60.

Decentralization. Decentralization is defined as the amount of decision making authority that is delegated to divisional managers. This variable is measured using an instrument developed by Vancil (1980). The four-item instrument asks managers to indicate the decision making power that they have in

four important operating decisions that can affect their performance: advertising and promotion, pricing on a major product or product line, R&D, and personnel. The Cronbach alpha is 0.73. In the analyses, the scores are reversed so that high scores indicate a high degree of decentralization, and vice versa.

Attitude. Attitude is defined in terms of subordinates' feelings and predispositions towards their jobs and their companies. To measure this variable, a seventeen-item instrument is used. The instrument comprises of seven questions related to respondents' perceptions about jobs (King, 1960), and ten questions related to their perceptions about companies (Miller, 1934). The Cronbach alpha coefficient is 0.92.

Performance. Performance is defined as the perceived performance of the divisional managers. It is measured using a self-rating instrument developed by Mahoney et al. (1963). This instrument has eight dimensions and one overall dimension. The eight dimensions capture a manager's performance in the areas of planning, investigating, coordinating, evaluating, supervising, staffing, negotiating, and representing. Mahoney *et al.* suggest that the eight dimensions should be independent and should explain at least 55 percent of the overall dimension of performance. The regression of the eight dimensions on the overall dimension produced an r-square of 53 percent. This r-square is slightly lower than what Mahoney *et al.* suggested. But, it is higher than those reported by Brownell and Hirst [(1986), 35%] and Dunk [(1989), 47%]. Furthermore, the score to be used in the analysis can be either the sum of the eight dimensions or the overall dimension. This study uses the overall dimension.

These instruments (not included the measure of performance) are also tested using the item homogeneity test. For each instrument, the score of each item is correlated with the total score. According to Ghiselli *et al.* (1981), if the elements of the instrument are

intended to measure the same trait, their scores should be positively correlated with the score of the trait; and the higher the correlations of these elements with the score of the trait, the more content-valid is the instrument. The results show that for each measure, the correlation coefficient of each item with the total score is significant at $p < 0.0001$. All the coefficients are higher than 0.50. Table 2 presents the statistics of the variables.

ANALYSIS

Following Drazin and Van de Ven (1985), Govindarajan (1988), and Roth *et al.* (1991), this study adopts the system of fit approach to test the hypothesis¹. This approach incorporates the contingency nature among several interrelated contextual factors (Drazin and Van de Ven, 1985), which is consistent with the nature of this study that examines three interrelated contingent factors simultaneously. As Venkatraman and Prescott (1990) argued, from the system perspective, the real test of the contingency theory is in examining the simultaneous and holistic pattern of interlinkages between the organizational contextual factors and the business unit's strategy and their collective effect on organizational performance.

There are three steps in the analysis (Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985). First, following Govindara-

jan (1988) an ideal fit (or combination) of strategies with their contextual factors (decentralization and participation in the budget) and the behaviour aspects of the executive (the executives of the SBUs' attitude) is developed theoretically. Table 3 presents the strategy implementation profile for both low cost and differentiation strategies. This ideal strategy implementation system serves as a benchmark against which the sample is tested. The assumption is that managers in firms that are able to develop a strategy implementation system close to the ideal fit perform better than those that are not; the higher the deviation or misfit score, the lower the performance will be. The sign of the association, therefore, is expected to be negative.

The second step is the calculation of the misfit score, or the euclidian distance. The misfit score is the sum of the deviation of the score of each contextual attribute from that the ideal fit scores (the difference between the actual score and the ideal score). The sample is partitioned into two groups: low cost and differentiation. A mean-split approach is used to partitioned the sample, and respondents whose scores on strategy equals with the mean (25) are dropped (thirteen respondents). The euclidian distance is calculated as follows (Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985):

$$DIST_{ij} = \sqrt{(X_{Is} - X_{js})^2}$$

where

$DIST_{ij}$ = euclidian distance from the j th focal unit to its ideal type (I)

X_{Is} = score of the ideal (I) type unit on the s th contingent factor.

X_{js} = actual score on the j th unit on the s th contingent factor.

¹ Alternatively, a multiple regression analysis can be used to test the hypothesis. With this approach, the hypothesis is tested by examining the highest order interaction term. The regression model would be: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_1X_2 + b_6X_1X_3 + b_7X_1X_4 + b_8X_2X_3 + b_9X_2X_4 + b_{10}X_3X_4 + b_{11}X_1X_2X_3 + b_{12}X_1X_3X_4 + b_{13}X_2X_3X_4 + b_{14}X_1X_2X_3X_4$ where, Y refers to performance, X_1 is strategy and X_2 - X_4 are the contingent factors. If b_{14} is significant, then the hypothesis is supported and vice versa. Econometrically, however, this model is problematic since by definition the interaction terms are the functions of the other variables. In other words, there is a serious problem of multicollinearity. This is another reason for using the system of fit approach.

Table 3. Ideal Profiles of Strategy Implementation Systems

Element of Strategy Implementation	Low Cost	Differentiation
Decentralization	3	21
Participation in Budget	4	28
Managers' Attitude*	119	119

*Positive attitude is needed in either low cost or differentiation strategies.

Table 2. Descriptive Statistics of Variables

Variables	Mean	Standard Deviation	Actual Range	Theoretical Range	Cronbach
Strategy	25.0	4.8	11 – 35	5 – 35	0.85
Participation in Budget	16.4	4.2	4 – 21	3 – 21	0.60
Decentralization	18.2	5.0	4 – 28	4 – 28	0.73
Attitude	88	15.8	47 – 114	17 – 119	0.92
Performance	5.6	0.7	3 – 7	1 – 7	

The third step is the hypothesis testing. Commonly, the hypothesis is tested by correlating $DIST_{ij}$ with performance (see for example, Govindarajan, 1988; and Roth *et al.*, 1991). A significantly negative coefficient will serve as evidence to support the hypothesis. Following prior research, this paper runs correlation analysis (Pearson's correlation) of the misfit scores and performance. The result shows that the correlation coefficient is -0.31, and it is significant at $p < 0.01$. This finding suggests that the farther (closer) a business unit's combination of strategy, structure, budget system, and attitude from the best combination or fit, the worse (higher) is performance of the business unit.

It is quite possible that the results for the whole sample may be dominated by a certain group (either low cost or differentiation groups). To find out whether such a thing happens, a correlation coefficient for each group is calculated. The results are consistent with the finding; the correlation coefficients of

differentiation and low cost groups are -0.29 and -0.21 respectively.

An additional analysis is done by running a regression analysis to ensure the negative impact of the misfit score on performance. The model is as follows:

$$Y = a + bMFIT + e, \text{ where}$$

- Y is the performance,
- MFIT is the misfit score ($DIST_{ij}$)
- a and b denote the parameter estimates, and e is the error term. The regression coefficient is expected to be significantly negative.

Table 4 presents the regression results. It is shown in the table that the goodness of the model is significant at $p < 0.02$. The coefficient of $DIST_{ij}$ (b) is negative and significant at $p < 0.01$. These results indicate that the variation in the misfit score does explain the variation in performance. They are consistent with the prediction that misfit scores negatively affect performance; the higher the misfit

score, the lower performance, and vice versa. These findings support the hypothesis of this paper that predicts a high degree of fit among strategy, structure, budget system, and attitude is associated with high performance, and a low degree of fit among these variables is associated with low performance.

Table 4. Results of Regression Model $Y = a + b\text{MFIT} + e$

Variables	Coefficient	t-value	Significance
Constant	6.20	25.46	0.001
MFIT	-0.10	-2.51	0.010

F: 6.312 (significant at 0.014). R^2 : 0.10,

CONCLUSIONS

A stream of research in the strategy literature deals with examining the strategy-performance relationship. The majority of studies in this area, however, were mainly addressed the issue of strategy choice. They were mostly concerned with examining the effect of strategy selection approaches/processes on firms' performance (i.e., testing the variations of performance across different type of strategies). The other important issue, the strategy implementation issue, has not been widely explored in the literature (Atkinson, 2006; Govindarajan, 1988; Okumus and Roper, 1998). Evidence has demonstrated that the performance of firms is also affected by the strategy implementation process. The strategy implementation research is mainly designed to examine the variations of performance within types of strategies: i.e., the variation of performance within types of strategies is explained by the match among strategy and contextual factors. For example, Govindarajan (1988) showed the alignment of decentralization, performance evaluation system, and manager's locus of control with strategy positively affected the performance of business units; Naranjo-Gil and Hartmann (2006) reported that functional areas such as accounting, marketing, human resource management, or information management deter-

mined the effectiveness of strategy implementation; Roth *et al.* (1990) showed that the alignment between international strategy and organizational design led to high performance; Sabherwal and Chan (2001) found that the appropriate match between strategy and information system improved performance; and Slater and Olson (2001) reported the positive impact of the alignment between strategy and sales force management on performance.

The main objective of this paper is to examine the effect of decentralization, planning system, and managers' attitude on the strategy implementation. Hrebiniak and Joice (1984) and Thompson *et al.* (2010) argue that the effectiveness of strategic implementation is greatly affected by management's decision regarding the organizational structures and the planning systems. This paper tests this proposition. It investigates whether the fit between strategy and budgeting systems and decentralization is associated with performance. Following Govindarajan (1988) this study also incorporates a psychological attribute of managers. The psychological attribute included in this study is manager's attitude toward their jobs and firms. Accordingly, the research hypothesis tested in this study is that a high degree of fit between strategy and the strategy implementation system (planning system, decentralization, and attitude) leads to high performance, and vice versa.

The findings support this hypothesis. Using a system approach, the study shows a negative relation between the misfit scores and performance. Both the regression coefficient and the correlation coefficient analyses produce a significantly negative coefficient. This means that strategic business units with low misfit scores tend to perform better than their counterparts with high misfit scores. These findings support Hrebiniak and Joice's contention about the important role of planning and organizational structure in a strategic implementation process. The findings also confirm

the positive impact of high attitude on performance.

In closing, the findings should be interpreted within the confine of the limitations of the study. First, the common limitations that apply to survey research should apply here. The study measures subjects' perceptions. The results may be biased if actual performance differs from subjects' perceptions. Specifically, performance used in this study is the managers' perceived performance in their functional areas, such as planning, organizing, coordinating, and managing. It may not reflect the economic performance of the business units. Investigation using economic performance measure, therefore, is necessary. Second, the study utilizes a mail survey and there may be a response bias to the extent that non-responders may be different from those who responded. But, results of the tests for non-response bias suggest that this is not a serious issue. Finally, the instrument used to measure the performance is not highly reliable. Although this is common in this kind of research, but it warrants that further research may use objective measures such as financial or market performance.

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